

Operational safety and ergonomics - course description

General information	
Course name	Operational safety and ergonomics
Course ID	06.2-WE-AutP-OSE-Er
Faculty	Faculty of Computer Science, Electrical Engineering and Automatics .
Field of study	Automatic Control and Robotics
Education profile	academic
Level of studies	First-cycle Erasmus programme
Beginning semester	winter term 2022/2023

Course information	
Semester	1
ECTS credits to win	1
Course type	obligatory
Teaching language	english
Author of syllabus	<ul style="list-style-type: none">dr inż. Sławomir Piontek

Classes forms					
The class form	Hours per semester (full-time)	Hours per week (full-time)	Hours per semester (part-time)	Hours per week (part-time)	Form of assignment
Lecture	15	1	-	-	Credit with grade

Aim of the course

Skills and references in range of: hazard/risk categories for working on energized electrical equipment.

Prerequisites

Fundamentals of electrical engineering.

Scope

Industrial safety. Electrical Hazard Classifications. Hazard/risk categories for working on energized electrical equipment.

Effects of electrical energy on humans. Shock hazards. Flash hazards. Radio Frequency (RF) and Microwave (MW) exposures. Contact thermal hazards.

Electrically safe work condition. Wiring systems of electric network. Electric hazard protection. Security precautions. Research and analysis of hazard protection.

Hazard related to Static Electricity. The discharge of static electricity. Electrostatic discharge (ESD) on human body.

Electric equipment exploitation. Electric shock protection. Electric arc protection. Surge protection. Protection of hazard in electric network. Electrical equipment conditions of approval and use.

General safety regulations in the CE marking directives. Certification. Standards.

Teaching methods

Lecture

Learning outcomes and methods of theirs verification

Outcome description	Outcome symbols	Methods of verification	The class form
Can define hazards related to electric devices maintenance		<ul style="list-style-type: none">an evaluation test	<ul style="list-style-type: none">Lecture

Assignment conditions

Recommended reading

1. Strojny J. *Safety of electrical equipment exploitation*, AGH, Kraków, 2003.
2. Matula E., Sych M. *Prevention electric shock in industry*, WNT Warszawa 1980.
3. URE (), *Energy Law*, www.gip.pl, Warszawa 2004.

Further reading

Environment, safety, and health, *manual*, www.llnl.gov university of california, 2007optional reading:

Lewis W.: CCNA Exploration Companion Guide LAN Switching and Wireless. Pearson Education Inc. 2009.

Notes

Modified by dr hab. inż. Wojciech Paszke, prof. UZ (last modification: 11-04-2022 09:05)

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